CLAIMS

What is claimed is:

1. A method of monitoring remote control transmissions, comprising:

5   identifying to a recipient device an intended target appliance;

receiving at the recipient device a transmission from the remote control;

determining if the transmission from the remote control is intended to command

an operation of the intended target appliance; and

when the transmission from the remote control is determined to be intended to

10   command an operation of the intended target appliance, using the transmission to update

data maintained within the recipient device such that the updated data reflects a state of

the intended target appliance which will result from the intended target appliance

performing the operation.

15   2. The method as recited in claim 1, wherein the data is maintained within a state table.

3. The method as recited in claim 1, comprising updating the data maintained within the

recipient device only in cases where the transmission from the remote control is intended

to command a toggled operation of the intended target appliance.

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4. The method as recited in claim 1, comprising placing the data into a known state upon

the recipient device receiving a reset command.

5. The method as recited in claim 4, wherein the reset command is received via the remote control.

6. The method as recited in claim 4, wherein the reset command is received via manual

5   activation of a rest button on the recipient device.

7. The method as recited in claim 1, wherein determining if the transmission from the remote control is intended to command an operation of the intended target appliance comprises comparing a command received from the remote control against a command

10   code set maintained within the recipient device.

8. The method as recited in claim 7, wherein identifying to a recipient device an intended target appliance causes the command code set to be selected from a library of command code sets.

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9. The method as recited in claim 8, wherein the library of command code sets is locally stored on the recipient device.

10. The method as recited in claim 8, wherein the library of command code sets is stored

20   remotely from the recipient device and the selected command code set is downloaded into the recipient device.

11. The method as recited in claim 7, wherein the command code set is learned from the remote control.

12. A method of monitoring remote control transmissions, comprising:

5   identifying to a recipient device an intended target appliance;

receiving at the recipient device a transmission from the remote control;

determining at the recipient device if the transmission from the remote control is intended to command an operation of the intended target appliance, and when the transmission from the remote control is determined to be intended to command an

10   operation of the intended target appliance, using the transmission to update data maintained within the recipient device such that the data reflects a state of the intended target appliance which will result from the intended target appliance performing the operation;

transmitting from the recipient device to the remote control at least a portion of

15   the maintained data; and

using the transmitted data within the remote control to determine if a transmission of a sequence of macro commands requires alteration given the state of the intended target appliance as indicated by the data.

20   13. The method as recited in claim 12, comprising updating the data maintained within the recipient device only in cases where the transmission from the remote control is intended to command a toggled operation of the intended target appliance.

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14. The method as recited in claim 12, comprising placing the data into a known state upon the recipient device receiving a reset command.

15. The method as recited in claim 14, wherein the reset command is received via the remote control.

16. The method as recited in claim 14, wherein the reset command is received via manual activation of a rest button on the recipient device.

17. The method as recited in claim 12, wherein determining if the transmission from the remote control is intended to command an operation of the intended target appliance comprises comparing a command received from the remote control against a command code set maintained within the recipient device.

18. The method as recited in claim 17, comprising identifying the intended target appliance to the recipient device to cause the command code set to be selected from a library of command code sets.

19. The method as recited in claim 18, wherein the library of command code sets is locally stored on the recipient device.

20. The method as recited in claim 18, wherein the library of command code sets is stored remotely from the recipient device and the selected command code set is downloaded into the recipient device.

21. The method as recited in claim 17, wherein the command code set is learned from the remote control.

22. The method as recited in claim 12, comprising using the data received from the recipient device to display via the remote control a state of the intended target appliance.

23. The method as recited in claim 12, comprising accepting input into the remote control that reflects an intended state for the target appliance in response to the remote control transmitting the macro command sequence.

24. The method as recited in claim 23, comprising using the received data within the remote control to omit from the macro command sequence those commands that would cause the intended target appliance to be placed into a state other than the intended state.

25. The method as recited in claim 12, comprising transmitting from the recipient device to the remote control all maintained data.

26. The method as recited in claim 12, wherein the recipient device transmits to the remote control at least a portion of the maintained data in response to a query message received from the remote control.

5   27. A method of updating a data representative of a current state of an intended target appliance, comprising:

receiving a transmission from a remote control; and

when the transmission from the remote control is determined to be one for commanding an operation of the intended target appliance, updating the data to represent

10   the current state of the intended target appliance which will result from the intended target appliance performing the operation commanded.

28. The method as recited in claim 27, comprising supplementing the data with information obtained directly from the intended target appliance.

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29. The method as recited in claim 27, wherein the data is maintained within a state table.

30. The method as recited in claim 27, comprising transmitting the data to a requesting

20   remote control.

31. The method as recited in claim 27, comprising transmitting the data to a requesting personal computer.

32. The method as recited in claim 27, comprising transmitting the data to a remote device via an Internet connection.

5   33. The method as recited in claim 27, wherein the data is maintained locally within a device which receives the transmission.

34. The method as recited in claim 27, wherein the data is maintain remotely from a device which receives the transmission.

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35. For use in a transmission monitoring device, a readable media having instructions for monitoring remote control transmissions, the instructions performing steps comprising:

receiving a transmission from a remote control;

determining if the transmission from the remote control is intended to command

15   an operation of an intended target appliance; and

when the transmission from the remote control is determined to be intended to command an operation of the intended target appliance, using the transmission to update data whereby the updated data reflects a state of the intended target appliance which will result from the intended target appliance performing the operation.

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36. The readable media as recited in claim 35, wherein the instructions perform the step of receiving data that identifies the intended target appliance.

37. The readable media as recited in claim 35, wherein the instructions perform the step of transmitting at least a portion of the data to the remote control.

38. The readable media as recited in claim 35, comprising updating the data maintained within the recipient device only in cases where the transmission from the remote control is intended to command a toggled operation of the intended target appliance.

39. The readable media as recited in claim 35, wherein the instructions perform the step of placing the data into a known state upon receipt of a reset command.

40. The readable media as recited in claim 39, wherein the reset command is received via the remote control.

41. The readable media as recited in claim 39, wherein the reset command is received via manual activation of a rest button on the recipient device.

42. The readable media as recited in claim 35, wherein determining if the transmission from the remote control is intended to command an operation of the intended target appliance comprises comparing a command received from the remote control against a locally stored command code set.

43. The readable media as recited in claim 42, wherein the command code set is selected from a library of command code sets.

44. The readable media as recited in claim 43, wherein the library of command code sets is locally stored.

5   45. The readable media as recited in claim 43, wherein the library of command code sets is remotely stored and the selected command code set is downloaded into local memory.

46. The readable media as recited in claim 43, wherein the command code set is learned from the remote control.

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47. A transmission monitoring system, comprising:

a remote control; and

a transmission monitoring device;

wherein the remote control and the transmission monitoring device are adapted to

15   bi-directionally communicate;

wherein the transmission monitoring device comprises a readable media having instructions for monitoring remote control transmissions, for receiving at the recipient device a transmission from a remote control, for using the transmission to update data to reflect a state of an intended target appliance which will result from the intended target

20   appliance performing the operation, and for transmitting at least a portion of the data to the remote control; and

wherein the remote control comprises a readable media having instructions for using data received from the transmission monitoring device to determine if a

transmission of a sequence of macro commands requires alteration given the state of the intended target appliance as indicated by the data.

48. The system as recited in claim 47, wherein the readable media of the transmission monitoring device has instructions for receiving data that identifies the intended target appliance.

49. The system as recited in claim 47, wherein the readable media of the transmission monitoring device has instructions for updating the data maintained within the recipient device only in cases where the transmission from the remote control is intended to command a toggled operation of the intended target appliance.

50. The system as recited in claim 47, wherein the readable media of the transmission monitoring device has instructions for placing the data into a known state upon the receipt of a reset command.

51. The system as recited in claim 50, wherein the reset command is received via the remote control.

52. The system as recited in claim 50, wherein the reset command is received via manual activation of a rest button on the transmission monitoring device.

53. The system as recited in claim 47, wherein the readable media of the transmission monitoring device has instructions for comparing a command received from the remote control against a command code set maintained within the transmission monitoring device.

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54. The system as recited in claim 53, wherein the command code set is selected from a library of command code sets.

55. The system as recited in claim 54, wherein the library of command code sets is

10 locally stored on the transmission monitoring device.

56. The system as recited in claim 54, wherein the library of command code sets is stored remotely and the selected command code set is downloaded into a memory of the transmission monitoring device.

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57. The system as recited in claim 54, wherein the command code set is learned from the remote control.

58. The system as recited in claim 47, wherein the readable media of the remote control

20 has instructions for using the data received from the transmission monitoring device to display a state of the intended target appliance.

59. The system as recited in claim 47, wherein the readable media of the remote control has instructions for accepting input that reflects an intended state for the target appliance in response to the remote control transmitting the macro command sequence.

5   60. The system as recited in claim 59, wherein the readable media of the remote control has instructions for using the received data to omit from the macro command sequence those commands that would cause the intended target appliance to be placed into a state other than the intended state.

10   61. The system as recited in claim 47, wherein the readable media of the transmission monitoring device has instructions for transmitting to the remote control all data.

62. The system as recited in claim 47, wherein the readable media of the transmission monitoring device has instructions for transmitting to the remote control at least a portion

15   of the data in response to a query message received from the remote control.

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63. For use in a transmission receiving device, a readable media having instructions for updating data representative of a current state of an intended target appliance, the instructions performing steps comprising:

20   receiving a transmission from a remote control; and

           when the transmission from the remote control is determined to be one for

commanding an operation of the intended target appliance, updating the data to represent

the current state of the intended target appliance which will result from the intended

target appliance performing the operation commanded.

64. The readable media as recited in claim 63, wherein the instructions perform the step

5   of supplementing the data with information obtained directly from the intended target

appliance.

65. The readable media as recited in claim 63, wherein the data is maintained within a

state table.

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66. The readable media as recited in claim 63, wherein the instructions perform the step

of transmitting the data to a requesting remote control.

67. The readable media as recited in claim 63, wherein the instructions perform the step

15   of transmitting the data to a requesting personal computer.

68. The readable media as recited in claim 63, wherein the intended target appliance

comprises the transmission receiving device.

20   69. The readable media as recited in claim 63, wherein the data is maintained locally

within the transmission receiving device.

70. The readable media as recited in claim 63, wherein the data is maintain remotely

from the transmission receiving device.